

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A stent-graft device for treating an abdominal aortic aneurysm, the stent-graft device comprising:

at least one stent member comprising at least one of a self-expanding stent member and a balloon-expandable stent member;

at least one tubular graft member coupled with the at least one stent member, the tubular graft member having a proximal end and at least one distal end, said at least one tubular graft member, once deployed, comprising a main graft member toward the proximal end of the tubular graft member and at least one sinusoidal leg member toward the distal end of the tubular graft member relative to the main graft member, the at least one sinusoidal leg having a plurality of bends, each of said at least one sinusoidal leg member being coupled with the main graft member, said at least one sinusoidal leg member having shape memory biasing said at least one sinusoidal leg member toward a sinusoidal shape such that, once deployed, said at least one sinusoidal leg member is elongatable with elongation of the abdominal aortic aneurysm; and

at least one skirt graft member coupled with at least one of the stent member and the tubular graft member at or near the proximal end of the tubular graft member and extending toward the distal end,

wherein the skirt graft member is configured to be placed in contact with the inner wall of the aortic aneurysm when the stent-graft device is implanted adjacent to the abdominal aortic aneurysm.

2. (Original) A stent-graft device as in claim 1, wherein at least one stent member comprises:

at least one self-expanding stent member; and

at least one balloon expandable stent member coupled with the at least one self-expanding stent member.

3. (Original) A stent-graft device as in claim 2, wherein the at least one self-expanding member and the at least one balloon-expandable member comprise a plurality of alternating members, every other alternating member comprising either a self-expanding material or a balloon-expandable material.

4. (Original) A stent-graft device as in claim 3, wherein the balloon-expandable material comprises stainless steel and the self-expanding material comprises nitinol.

5. (Original) A stent-graft device as in claim 3, wherein the alternating members are coupled together with one or more pieces of adhesive.

6. (Original) A stent-graft device as in claim 5, wherein the adhesive further couples the alternating members with the tubular graft member.

7. (Original) A stent-graft device as in claim 3, wherein the alternating members are coupled together via one of welding, soldering or tying.

8. (Original) A stent-graft device as in claim 3, wherein the alternating members comprise a plurality of diamond-shaped members coupled together to form a cylindrical stent.

9. (Canceled)

10. (Previously Presented) A stent-graft device as in claim 1, wherein the at least one sinusoidal leg member comprises two leg members for coupling the distal end of the tubular graft member with two iliac arteries branching from the abdominal aorta.

11. (Previously Presented) A stent-graft device as in claim 10, wherein said at least one sinusoidal leg member comprises two sinusoidal leg members.

12. (Original) A stent-graft device as in claim 11, wherein the two sinusoidal leg members are helically intertwined.

13. (Original) A stent-graft device as in claim 10, wherein each of the two leg members is coupled with an iliac stent member at its distal end.

14. (Previously Presented) A stent-graft device as in claim 13, wherein the iliac stent member comprises at least one of a self-expanding stent member and a balloon-expandable stent member.

15. (Original) A stent-graft device as in claim 10, wherein each of the two leg members is removably coupleable with the main graft member.

16. (Original) A stent-graft device as in claim 9, wherein the main graft member is coupled with at least one stent member at the proximal end of the tubular graft member, and each of the at least one leg members is coupled with at least one stent member at the distal end of the tubular graft member.

17. (Canceled)

18. (Original) A stent-graft device as in claim 1, further comprising a suprarenal anchoring member coupled with the stent member for anchoring the stent-graft device at a location superior to renal arteries branching from the abdominal aorta.

19. (Original) A stent-graft device as in claim 18, wherein the suprarenal anchoring member comprises at least one of a self-expanding stent member and a balloon expandable stent member.

20. (Original) A stent-graft device as in claim 18, wherein the suprarenal anchoring is coupled with at least one of the self-expanding stent member and the balloon expandable stent member by at least one connective member selected from the group consisting of wire, ribbon, rods and bands of material.

21. (Original) A stent-graft device as in claim 18, further comprising an infrarenal anchoring member coupled with at least one of the stent member and the suprarenal anchoring member for further anchoring the stent-graft device at a location inferior to the renal arteries.

22. (Original) A stent-graft device as in claim 21, wherein the infrarenal anchoring member comprises at least one of a self-expanding stent member and a balloon expandable stent member.

23. (Original) A stent-graft device as in claim 1, further comprising:
an infrarenal anchoring member for anchoring the stent-graft device at a location inferior to renal arteries branching from the abdominal aorta, the infrarenal anchoring member comprising at least one of a self-expanding member and a balloon-expandable member.

24. (Original) A stent-graft device as in claim 1, further comprising:
at least one expandable balloon member coupled with the at least one balloon-expandable stent member for expanding the balloon-expandable stent member.

25. - 32. (Canceled)

33. (Currently Amended) A stent-graft device for treating an abdominal aortic aneurysm, the stent-graft device comprising:

a proximal stent member for coupling the stent device with the abdominal aorta proximal to the aneurysm;

at least one distal stent member for coupling the stent device with a blood vessel distal to the aneurysm; and

at least one graft member coupled with and extending between the proximal stent member and the at least one distal stent member, at least a portion of the graft member being pre-shaped with ~~at least one bend~~ a plurality of bends having shape memory such that, upon deployment, said at least a portion of the graft member is biased to have an elongatable sinusoidal shape,

wherein the sinusoidal portion is configured to be positioned at least partly within the abdominal aortic aneurysm when the stent-graft device is implanted adjacent to the abdominal aortic aneurysm such that the stent graft device is elongatable with elongation of the abdominal aortic aneurysm.

34. (Original) A stent-graft device as in claim 33, wherein the at least one distal stent member comprises two iliac stent members for coupling the stent-graft device with two iliac arteries branching from the abdominal aorta.

35. (Original) A stent-graft device as in claim 34, wherein the at least one graft member comprises:

a main graft member coupled with the proximal stent member; and

two leg members, each leg member coupled with the main graft member and one of the two iliac stent members.

36. (Previously Presented) A stent-graft device as in claim 34, wherein the at least one graft member comprises:

a main graft member coupled with the proximal stent member; and

two leg members, each leg member removably coupleable with the main graft member and coupled with one of the two iliac stent members.

37. (Original) A stent-graft device as in claim 33, wherein at least one of the proximal stent member and the at least one distal stent member comprises:

at least one self-expanding stent member; and

at least one balloon expandable stent member coupled with the self-expanding stent member.

38. (Original) A stent-graft device as in claim 33, further comprising a suprarenal anchoring member coupled with the proximal stent member for anchoring the stent-graft device at a location superior to at least one renal artery branching from the aorta.

39. (Currently Amended) A stent-graft device as in claim 38, wherein the suprarenal anchoring member comprises at least one of a self-expanding member and a balloon expandable member being part of the same suprarenal anchoring member.

40. (Original) A stent-graft device as in claim 33, further comprising at least one skirt member coupled with the proximal stent member and extending distally.

41. - 54. (Canceled)

55. (Currently Amended) A stent-graft device for treating an abdominal aortic aneurysm, the stent-graft device comprising:

at least one stent member comprising a plurality of expandable members coupled together circumferentially to form a cylinder, ~~some~~ at least one of the expandable members that are coupled together circumferentially comprising a self-expanding material ~~others~~ and at least another of the expandable members comprising a balloon-expandable material, the self-

expanding material and the balloon expandable material being part of the same at least one stent member; and

at least one tubular graft member coupled with the at least one stent member, the tubular graft member having a proximal end and at least one distal end, wherein the at least one stent member is configured to anchor the tubular graft member in an artery selected from the aorta and an iliac artery.

56. (Previously Presented) A stent-graft device as in claim 55 wherein the at least one stent member has a first end portion, a second end portion, and a middle portion between the first end portion and second end portion, and wherein the plurality of expandable members are disposed in the middle portion.

57. (Previously Presented) A stent-graft device as in claim 55 wherein the balloon-expandable material alternates with the self-expanding material such that every other expandable member is balloon expandable and every other expandable member is self-expanding.

58. (Previously Presented) A stent-graft device as in claim 55 further comprising at least one skirt graft member coupled with at least one of the stent member and the tubular graft member at or near the proximal end of the tubular graft member and extending toward the distal end,

wherein the skirt graft member is configured to be placed in contact with the inner wall of the aortic aneurysm when the stent-graft device is implanted adjacent to the abdominal aortic aneurysm.

59. (Previously Presented) A stent-graft device as in claim 55, wherein the expandable members comprise diamond-shaped members.

60. (Currently Amended) A stent-graft device as in claim 56, wherein at least one of the first end portion and second end portion includes both self-expanding material and balloon-expandable material being part of the same end portion.

61. (Previously Presented) A stent-graft device as in claim 56, wherein the at least one stent member comprises balloon-expandable members and self-expanding members alternating in a pattern that is disposed in the middle portion, and wherein the pattern is arranged such that the middle portion is self-expanding to a first diameter and further balloon-expandable to a second diameter, the second diameter being larger than the first diameter.

62. (Previously Presented) A stent-graft device as in claim 55, wherein the stent member is configured to be self-expanding to a first diameter and further balloon-expandable to a second diameter, the second diameter being larger than the first diameter.

63. (Currently Amended) A stent-graft device as in claim 55, wherein at least a portion of the at least one graft member has a sinusoidal shape having a plurality of bends.

64. (Currently Amended) A stent-graft device for treating an abdominal aortic aneurysm, the stent-graft device comprising:

at least one stent member comprising a self-expanding stent layer and a balloon-expandable stent layer being part of the same at least one stent member, the self-expanding stent layer and the balloon-expandable stent layer being laminated to one another radially from a central axis of the stent member; and

at least one tubular graft member coupled with the at least one stent member, the tubular graft member having a proximal end and at least one distal end, wherein the at least one stent member is configured to anchor the tubular graft member in an artery selected from the aorta and an iliac artery.

65. (Previously Presented) A stent-graft device as in claim 64, further comprising at least one skirt graft member coupled with at least one of the stent member and the tubular graft member at or near the proximal end of the tubular graft member and extending toward the distal end,

wherein the skirt graft member is configured to be placed in contact with the inner wall of the aortic aneurysm when the stent-graft device is implanted adjacent to the abdominal aortic aneurysm.

66. (Previously Presented) A stent-graft device as in claim 64, wherein the self-expanding stent layer and the balloon-expandable stent layer are laminated along an entire interface surface.

67. (Previously Presented) A stent-graft device as in claim 64, wherein the self-expanding stent layer and the balloon-expandable stent layer are held together at discrete points about a common circumferential interface.

68. (Previously Presented) A stent-graft device as in claim 64, wherein the self-expanding stent layer and the balloon-expandable stent layer are configured such that the stent member is self-expanding to a first diameter and further balloon-expandable to a second diameter, the second diameter being larger than the first diameter.

69. (Currently Amended) A stent-graft device as in claim 64, wherein the at least a portion of the at least one graft member has a sinusoidal shape having a plurality of bends.

70. (Previously Presented) A stent-graft device as in claim 64, wherein the at least one tubular graft member comprises:

a main graft member toward the proximal end of the tubular graft member; and

at least one leg having a proximal end and a distal end, each leg member being coupled with the main graft member at its proximal end and extending toward the distal end of the tubular graft member.

71. (Previously Presented) A stent-graft device as in claim 70, wherein the at least one leg member comprises two leg members for coupling the distal end of the tubular graft member with two iliac arteries branching from the abdominal aorta.

72. (Currently Amended) A stent-graft device as in claim 71, wherein the two leg members comprise two sinusoidal leg members having a plurality of bends.

73. (Currently Amended) A stent-graft device as in claim 71, wherein the two leg members are helically intertwined to provide at least 360 degrees of helix.

74. (Withdrawn) A stent-graft device for treating an abdominal aortic aneurysm, the stent-graft device comprising:

a stent member;

a tubular graft member coupled with the stent member, the tubular graft member having a proximal end and comprising:

a main graft member toward the proximal end of the tubular graft member, and

a first leg member and a second leg member permanently coupled with the main graft member, at least one of the first leg member and second leg member having a distal end configured to be attached with an iliac artery upon deployment; and

a skirt graft member coupled with the stent member and the tubular graft member at or near the proximal end of the tubular graft member and extending toward the distal end, the skirt graft member being configured to be placed in contact with the inner wall of the aortic aneurysm when the stent-graft device is implanted adjacent to the abdominal aortic aneurysm.

75. (Withdrawn) The stent-graft device of claim 74, wherein the skirt graft member is configured to be placed in contact with the inner wall of the aortic aneurysm when the stent-graft device is implanted adjacent to the abdominal aortic aneurysm.

76. (Withdrawn) The stent-graft device of claim 74, wherein at least one of the first leg member and second leg member has shape memory biasing said at least one of the first leg member and second leg member toward a sinusoidal shape.

77. (Withdrawn-Currently Amended) The stent-graft device of claim 76, wherein the first leg member and second leg member are helically intertwined.

78. (Withdrawn) The stent-graft device of claim 74, wherein the stent member includes one or more self-expanding stent members and one or more balloon-expandable stent member, the one or more self-expanding stent members and one or more balloon-expandable stent members being in a configuration resulting in the stent member being self-expanding to a first diameter and further balloon-expandable to a second diameter.

79. (Withdrawn) A stent device, comprising:
a plurality of expandable members coupled together to form a cylinder, the cylinder having a first end portion, a second end portion, and a middle portion between the first end portion and second end portion, the expandable members including at least one self-expanding member and at least one balloon-expandable member, said at least one self-expanding member and said at least one balloon-expandable member being disposed in the middle portion.

80. (Withdrawn) The stent device of claim 79, wherein said at least one self-expanding member and said at least one balloon-expandable member are in a configuration resulting in at least the middle portion being self expanding to a first diameter and further balloon-expandable to a second diameter.

81. (Withdrawn) The stent device of claim 79, wherein said at least one self-expanding member and said at least one balloon-expandable member are radially laminated.

82. (Withdrawn) The stent device of claim 79, wherein said at least one self-expanding member and said at least one balloon-expandable member are axially laminated.

83. (Withdrawn) The stent device of claim 79, wherein said at least one self-expanding member and said at least one balloon-expandable are configured in a pattern.

84. (Withdrawn) The stent device of claim 79, further comprising a graft member coupled with the cylinder.